



IS 2185 (Part 3) : 1984 Specification for Concrete Masonry Units : **Part 3 Autoclaved Cellular (Aerated) Concrete Blocks**

Concrete masonry blocks are a broad category of building materials made from cement, water, and aggregates, used for constructing **walls** and other structures. **Autoclaved Cellular (Aerated) Concrete Blocks** fall within this category but stand out for being **lighter** and more **environmentally friendly**.

Autoclaved Cellular (Aerated) Concrete Blocks are made using a mix of cement, lime, water, and an expansion agent, creating a porous structure filled with **air pockets**. This design gives Autoclaved Cellular (Aerated) Concrete Blocks superior **insulation and energy efficiency** compared to traditional Concrete Masonry Blocks. While both types provide structural durability, Autoclaved Cellular (Aerated) Concrete Blocks are often chosen for projects emphasising **thermal efficiency**, ease of **handling**, and **sustainability**.

IS 2185 (Part 3) addresses consumers' expectations by specifying various requirements. This standard classifies Autoclaved Cellular (Aerated) Concrete Blocks into two grades based on their **compressive strength** against properties related to **density** and **thermal conductivity**. **IS 2185 (Part 3)** also specifies the material requirement set out in various other Indian Standards, for example, Lime shall be in accordance with **IS 712**.

This standard also sets requirements for different grades: high-strength and lower-strength blocks, each with distinct strength and shrinkage characteristics. It outlines permissible limits for density, compressive strength, and **shrinkage**. For instance, blocks with a **density** between 551-650 kg/m³ shall have a **thermal conductivity cap** of 0.24 W/m·K.